

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A telecommunications device for processing packet data received over a communications network, wherein the device includes a plurality of data processors, the device comprising:

a plurality of control processors, each control processor configured to manage data routing paths between data processors in the plurality of data processors according to the corresponding physical locations of the data processors in the telecommunications device; and

a plurality of logical nodes, wherein each logical node includes ~~one~~ two or more data processors in the telecommunications device and is associated with a control processor in the plurality of control processors such that each control processor is coupled to a first data processor of its associated logical node and manages data routing paths ~~for~~ within the logical node in relation to said first data processor,

wherein each logical node is associated with a distinct network service provider and routes data for the network service provider using the one or more data processors included in the logical node according to the data routing paths.

2. (original) The device of claim 1, further comprising a power source configured to power the plurality of logical nodes.

3. (original) The device of claim 1, further comprising a plurality of physical slots, wherein each of the plurality of data processors are coupled to a physical slot in the plurality of physical slots.

4. (original) The device of claim 3, wherein a data path from a first physical slot location to a second physical slot location in the device is mapped to a third physical slot location to a fourth physical slot location.

5. (canceled)

6. (currently amended) A telecommunications shelf for sending packet data to destinations on a communications network, including a plurality of slots configured to connect to data processors, the shelf comprising:

a first logical shelf including a first set of two or more data processors, wherein each data processor in the first set is connected to a first set of one or more slots in the plurality of slots; and

a second logical shelf including a second set of two or more data processors, wherein each data processor in the second set is connected to a second set of one or more slots in the plurality of slots,

a first control processor separate from the first set of data processors configured to manage data routing paths between data processors of the first set according to their corresponding positions in the first logical shelf, and

a second control processor separate from the second set of data processors configured to manage data routing paths between data processors of the second set according to their corresponding positions in the second logical shelf,

wherein the first logical shelf is associated with a first network service provider that transfers data using the first set of data processors and the second logical shelf is associated with a second network service provider that transfers data using the second set of data processors.

7. (canceled)

8. (previously presented) The telecommunications shelf of claim 6, wherein the first control processor is configured to manage data routing paths for the first entity and the second control processor is configured to manage data routing paths for the second entity.

9. (previously presented) The telecommunications shelf of claim 6, wherein the first control processor is configured to map data routing paths based on a physical location of the data processors in the first set of data processors.

10. (previously presented) The telecommunications shelf of claim 6, wherein the second control processor is configured to map data routing paths based on a physical location of the data processors in the second set of data processors.

11. (previously presented) The telecommunications shelf of claim 6, further comprising a power source configured to provide power to the first and second set of data processors in the first and second logical shelves.

12. (currently amended) A method for routing packet data over a communication network using a telecommunications device that includes a plurality of data processors, the method comprising:

configuring a first set of two or more data processors in the plurality of data processors for a first logical node in the telecommunications device;

configuring a second set of two or more data processors in the plurality of data processors for a second logical node in the telecommunications device;

managing routing paths within the first logical node with a first control processor distinct from the first set of data processors;

managing routing paths within the second logical node with a second control processor distinct from the second set of data processors;

receiving data associated with a first network service provider;

routing the data associated with the first network service provider between data processors of the first logical node according to a first mapping of the first control processor;

receiving data associated with a second network service provider; and
routing the data associated with the second network service provider between data processors of the second logical node according to a second mapping of the second control processor.

13. (previously presented) The method of claim 12, wherein receiving data associated with the first network service provider comprises receiving data for a first routing data path from a first location to a second location in the telecommunications device, and further comprising:

determining a third and fourth location in the telecommunications device in which to route the data associated with the first network service provider,

wherein routing the data associated with the first network service provider comprises routing the data from a data processor in the third location to a data processor in the fourth location, the third and fourth data processors included in the first set of data processors.

14. (previously presented) The method of claim 13, wherein receiving data associated with the second network service provider comprises receiving data for a second routing data path from a fifth location to a sixth location in the telecommunications device, and further comprising:

determining a seventh and eighth location in the telecommunications device in which to route the data associated with the second network service provider,

wherein routing the data associated with the second network service provider comprises routing the data from a data processor in the seventh location to a data processor in the eighth location, the seventh and eighth data processors included in the second set of data processors.

15. (canceled)

16. (previously presented) The method of claim 12, wherein the first control processor manages data routing paths for the first network service provider and the second control processor manages data routing paths for the second network service provider.

17. (previously presented) The device of claim 1, wherein the packet data is formatted according to the OC3, OC12, OC48, Ethernet, or Gigabit Ethernet protocols.